

## REMARKS

### Status of the Claims

Claims 1-27 remain pending in the present application. Claims 1, 4-6, 11-15, 17, 19-22, and 26 have been amended to more clearly distinguish over the art cited.

### Claims Rejected under 35 U.S.C. § 103(a)

Claim 1-6, 8, 10, 15, 18-21, and 24-27 are rejected as unpatentable over U.S. Patent No. 6,816,120 (Kuramoto) in view of U.S. Patent No. 3,742,513 (Ehrenspeak). The Examiner indicates that Kuramoto shows in Fig. 2, an accessory 10 and method for increasing range, for use with an existing external antenna 20 that includes a support 22 coupled to a wireless device, as shown in Fig. 9 of the reference. Ehrenspeak is relied upon to show a reflector and a director spaced from a driven active element of an antenna according to a wavelength dimension. Applicants respectfully disagree with this rejection for the reasons noted below, particularly in view of the amendment to independent Claims 1, 11, and 19.

Once again, in the interest of reducing the complexity of the issues for the Examiner to consider in this response, the following discussion focuses on amended independent Claims 1, 11, and 19. The patentability of each dependent claim is not necessarily separately addressed in detail. However, applicants' decision not to discuss the differences between the cited art and each dependent claim should not be considered as an admission that applicants concur with the Examiner's conclusion that these dependent claims are not patentable over the cited references. Similarly, applicants' decision not to discuss differences between the prior art and every claim element, or every comment made by the Examiner, should not be considered as an admission that applicants concur with the Examiner's interpretation and assertions regarding those claims. Indeed, applicants believe that all of the dependent claims patentably distinguish over the references cited. However, a specific traverse of the rejection of each dependent claim is not required, since dependent claims are patentable for at least the same reasons as the independent claims from which the dependent claims ultimately depend.

### Patentability of Claim 1

The Examiner has continued to maintain that Fig. 9 of the Kuramoto reference shows "the entire assembly 1 clearly disposed upon the wireless device beneath the support." However, Kuramoto never states or even suggests that the rectangle shown beneath the antenna and base table in Fig. 9, is a wireless device. The rectangle is not identified by a reference number and is not

described by any text in the reference. The Examiner thus bases this assertion and his rejection of Claim 1 on a presumption that is not supported by any actual disclosure in the reference, but is simply an opinion or a belief by the Examiner that since *something* is shown supporting the base table and antenna in Fig. 9, it would be obvious for that *something* to be a wireless device. It can more logically be asserted that the rectangle shown in Fig. 9 of Kuramoto is simply a table, or a desk, or some other supporting entity that is not a wireless device. To justify the assertion made by the Examiner and the rejection of Claim 1 over Kuramoto (and the rejection of each of the other independent claims as being obvious), there must be some basis taught by the cited reference, or the required relationship must be clearly within the knowledge of one of ordinary skill in the art. The Examiner has failed to provide any sufficient justification for asserting that Kuramoto teaches or shows that a wireless device actually supports or is directly coupled to the base table of the antenna; it seems equally logical and plausible that Kuramoto does not and had no reason to do so.

Applicants submit that Kuramoto did NOT contemplate that the antenna or base table 22 be supported by the wireless device, since he failed to so indicate. The antenna element of Kuramoto extends vertically upward from the center of a relatively large flat cylindrical base table 22 that can readily support antenna element 21 in a stable condition on any horizontal surface, such as a table or desk, so that the base table is disposed next to a wireless device. A wireless device that is sitting next to the base table of the antenna, on the same table or desk surface, can then be readily coupled to the antenna via a coaxial cable 2 and coaxial connector 3, which is the approach suggested by Figs. 1 and 2 of Kuramoto. There need be no contact between base table 22 and the wireless device, other than through the connection made via the coaxial cable. The Examiner should thus NOT continue to maintain that Kuramoto teaches or suggests that the wireless device is coupled to and physically mounted to a support for a conductive material, as recited in applicants' Claim 1 (as originally filed).

There are now further differences between the cited art and the amended independent claims. Specifically, applicants' subparagraph (b) of Claim 1 now recites:

(b) a conductive material disposed on the support and extending over an area of sufficient size to define a conductive surface, so that when the accessory is disposed adjacent to an existing antenna system of a wireless device, the conductive surface serves as a reflector for wireless signals to enhance at least one of a range and directionality of wireless signals transmitted or received by the wireless device, thereby enabling the range and directionality of wireless signals that are transmitted and received, to be enhanced by the accessory, wherein the support is formed and

thereby adapted to be removably coupled and physically mounted to the wireless device in a configuration selected from the group consisting of:

(i) a first configuration in which *the support is adapted to removably mount on and be fully supported by an existing external antenna that comprises the existing antenna system, where the existing external antenna is directly affixed to and extends from the wireless device*, and in which the support is formed so that the conductive material is disposed at the predefined distance from the existing external antenna when the support is mounted on the existing external antenna; and

(ii) a second configuration in which *the support is adapted to couple with a housing of a wireless device and to thereby orient a disposition of each of the wireless device, the conductive material, and the existing antenna system, so that the conductive material is disposed at the predefined distance from the existing antenna system*. (Emphasis added.)

This portion of Claim 1 now recites that there are two possible configurations for the support on which the conductive material is disposed. An example of the first configuration is shown in applicants' FIGURES 2A-2C, 7A, 7B, and 8A-8C. In the first configuration provided in this recitation of Claim 1 quoted above, the support is *mounted on and fully supported by an existing external antenna*. Moreover, this portion of Claim 1 recites that "*the existing external antenna is directly affixed to and extends from the wireless device*." In contrast, even assuming *arguendo* that the Examiner is correct in asserting that it would be obvious to support the base table and antenna of Kuramoto with a wireless device, there is no teaching or suggestion in Kuramoto that the antenna element 21 is *directly affixed to* a wireless device or that antenna element 21 *extends from* a wireless device. If base table 22 of antenna unit 20 is resting atop a wireless device, as the Examiner asserts, it is clear that antenna element 21 is not *affixed to* the wireless device and does not *extend from* a wireless device. Antenna element 21 instead extends from base table 22, and the Examiner asserts that base table 22 is only *resting on* a wireless device. There is no reason why one of ordinary skill in the art would understand that base table 22 is somehow affixed to a wireless device in Kuramoto, and no reason to understand that base table 22 in some manner *extends from* the wireless device. The coaxial cable is used by Kuramoto to electrically connect the antenna element to a wireless device, but there is no structure shown in Kuramoto that would enable the antenna element to be affixed to and extend from a wireless device.

In the second configuration recited in Claim 1, applicants' now recite that "*the support is adapted to couple with a housing of a wireless device and to thereby orient a disposition of each of*

1 the wireless device, the conductive material, and the existing antenna system, so that the conductive  
2 material is disposed at the predefined distance from the existing antenna system." An example of  
3 this configuration is illustrated in applicants' FIGURES 3A, 3B, and FIGURES 5-6 (FIGURE 4 also  
4 shows a side elevational view of the support mounted on a vertical surface, but does not show the  
5 wireless device). Applicants' specification discloses that "[A]daptor 60 includes a base 64 that  
6 couples to the bottom of wireless LAN base station 42, supporting both accessory 60 and the wireless  
7 LAN base station in a vertical orientation, as shown in FIGURES 3A and 3B." FIGURE 3A clearly  
8 indicates that reflector 62 is disposed about  $\frac{1}{4}$  wavelength from external antenna 56, when the  
9 wireless device is coupled to and oriented by being mounted in the slot of base 64 (see slot 70 in  
10 FIGURE 4). This slot *orients* the wireless device so that it is generally parallel to the reflector  
11 surface formed of the conductive material (as shown in FIGURE 3A) and also establishes the  
12 wavelength dependent spacing between the reflector surface and the antenna system of the wireless  
13 device, as shown in FIGURE 3A. There is no teaching or suggestion in Kuramoto that the base table  
14 (or other supporting structure supporting the antenna or reflector 10) provides any equivalent  
15 orientation feature relative to a wireless device. In Kuramoto, the antenna element is used to orient  
16 reflector 10 around the antenna element. Base table 22 does NOT provide any orienting function for  
17 the reflector and does not provide any orienting function relative to a wireless station, *because it does*  
18 *not need to do so*. Kuramoto never teaches or suggests any orientation relationship of the base table  
19 or antenna in regard to *a wireless device* and does not teach or suggest that a housing of a wireless  
20 device is coupled to a support for an antenna system to provide any orientation function. Based upon  
21 the differences noted above, it will be evident that the prior art fails to teach all that is recited by  
22 applicants' Claim 1, and the claim is therefore patentable over the art of record.

23 Dependent claims inherently include all that is recited in the independent claim from which  
24 they ultimately depend. Therefore, Claims 2-10 are patentable over the cited art for at least the same  
25 reasons as discussed above in connection with traversing the rejection of Claim 1.

#### 26 Patentability of Claim 11

27 The Examiner has applied the references cited in rejecting Claim 1 in the same manner  
28 against Claim 11. Applicants have amended Claim 11 to generally include the same recitation  
29 discussed above as distinguishing over the cited art. Accordingly, Claim 11 is patentable over the art  
30 of record for the same reasons as discussed above in traversing the rejection of Claim 1. Similarly,

1 dependent Claims 12-18, which ultimately depend from Claim 11, are patentable for at least the same  
2 reasons as Claim 11, since these dependent claims inherently include all that is recited in Claim 11.

3 Patentability of Claim 19

4 The same art has been applied by the Examiner against Claim 19, as was applied in rejecting  
5 Claims 1 and 11, and the respective dependent claims of each of these independent claims. Claim 19  
6 has been amended in a manner that is generally similar to the amendment to the other two  
7 independent claims. Accordingly, Claim 19 is patentable over the art of record for the same reasons  
8 as discussed above in traversing the rejection of Claim 1. Also, since dependent claims inherently  
9 include the recitation of the independent claim on which they ultimately depend, Claims 20-27 are  
10 patentable over the cited art for at least the same reasons as Claim 19.

11 In consideration of the above Remarks, applicants request that the Examiner withdraw the  
12 rejection of all claims in the application and pass the case to issue. Should any further questions  
13 remain unresolved, the Examiner is asked to telephone applicants' attorney at the number listed  
14 below.

15 Respectfully submitted,

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